REMARKS

Applicant has carefully reviewed and considered the Final Office Action mailed on December 28, 2005, and the references cited therewith.

No claims are amended, canceled, or added; as a result, claims 1-8 are now pending in this application.

§ 103 Rejection of the Claims

Claims 1-8 were rejected under 35 USC § 103(a) as being unpatentable over Rackman (U.S. Patent No. 6,323,961) in view of Pryor, et al. (U.S. Patent No. 4,739,414).

Applicant does not admit that the Rackman reference is indeed prior art and reserves the right to swear behind the same at a later date.

Independent claims 1, 3, 5, and 8.

In the Final Office Action, the Examiner cites the Rackman reference as describing:

> "indexing a plurality of cross linear samplings in a forward sequential order (a sensor which can travel in a reciprocative manner, for reading out an image of the original on the holder line by line [indexing of sequential order] on a forward route and a backward route, see col. 4, lines 1-25; and indexing a plurality of cross linear samplings in a reverse sequential order, (reading out an image of the original line by line [indexing of sequential order] on a forward route and backward route, see col. 3, lines 65 through col. 4., lines 1-25).

In column 3, lines 27-28, 39-40, 44-46, 49-51, and 54-56, the Rackman reference states:

> In the system of FIG. 1, character recognition is the basis for determining document orientation. . . . Incoming data, or a representation of it, is stored in RAM memory 14. . . . The data stored in RAM 14 is accessed by character recognition processor 16 through controller 12. . . . The character recognition program determines whether an incoming document arrived top first or bottom first. . . . A command sent over line 36 controls reading to take place either in the same order in which data was stored, or in the reverse order . . .

Based on the above statements, the Rackman reference appears to teach determining whether an incoming document that was already scanned and stored in memory,

conventionally from top to bottom, arrived top first or bottom first by a character recognition program so as to control whether reading of the already stored data takes place either in the same order in which the data was stored or in the reverse order.

In column 3, lines 65-67, and in column 4, lines 1-9, and 48-50, the Rackman reference further states:

> FIG. 2 shows a typical document which arrives top edge first. . . the document is scanned. . .from left to right, and top to bottom. Successive scan lines are numbered 1-N, . . . The incoming data is processed and a representation of it is stored in memory 14 in the order in which it is received. FIG. 3 shows an "upside down" document, with scanning taking place in the reverse direction. The scan lines are still numbered 1-N, but they effectively scan the document from bottom to top, and right to left. . . . the software can scan the data in the memory twice, once in the order shown in FIG. 2, and once in the order shown in FIG. 3. . .

The Rackman reference appears to refer to "scanning the document" as reading the representative data stored in memory. In other words, the Rackman reference teaches that software can read (or "scan") the data out of memory in the order it was received or in a reverse order. (see col. 4, lines 26-43).

In contrast, Applicant's independent claim 1, 3, 5, and 8 recite, besides other things:

> indexing a plurality of cross linear samplings in a forward sequential order;
> indexing a plurality of cross linear samplings in a reverse sequential order.

Furthermore, page 4, lines 17-20 and lines 22-26, of Applicant's specification recites:

> For those images scanned from top to bottom of the media, . . . each successive "cross linear sampling" is forward indexed in sequential order, i.e., S_1, S_2, S_3, . . . S_x where S is a cross linear sampling from 1 through X. . . .
> For those images scanned from the bottom of the media to the top of the media, . . . each successive "cross linear sampling" is reverse indexed in reverse sequential order, i.e., S_x, S_{x-1}, S_{x-2}, S_{x-3}, . . . S_1, where S is a cross linear sampling from X through 1.

The Rackman reference does not describe, indexing a plurality of cross linear samplings in a forward sequential order, and indexing a plurality of cross linear

samplings in a reverse sequential order. Rather, the Rackman reference appears to teach reading the image data in the order it was received or in the reverse order it was received. That is, the Rackman reference appears to teach storing the data associated with scan lines, numbered 1-N, and then using software to read (or "scan") the associated stored data in a forward and reverse manner.

As discussed above, each cross linear sampling in a forward direction and a reverse direction is indexed in a sequential order. The Applicant was unable to locate a teaching of indexing image data in a forward direction and a backward direction, anywhere in the Rackman reference.

As such, each and every element of Applicant's independent claims 1, 3, 5, and 8 are neither taught nor suggested in the Rackman reference. Further, the Pryor reference does not cure the deficiencies of the Rackman reference. The Pryor reference appears to describe an imaging system having a photosensor array arm that can scan from left to right or right to left. However, applicant was unable to locate teaching of indexing image data anywhere in the Pryor reference. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the §103 rejection for independent claims 1, 3, 5, and 8, as well as those claims which depend therefrom.

The Examiner also cites column 9, lines 31-37 of the Pryor et al. reference (hereinafter "the Pryor reference") as teaching "moving a second scan-line relative to the object in a bottom to top scan direction," (moving the image reader in both directions).

In column 9, lines 31-40, the Pryor reference states:

> The direction of motor 95 can be reversed, thereby allowing arm 18 to be driven from left to right or from right to left. The electronics for imaging system 15 allows the linear photosensor array in the arm to be scanned from top to bottom or from bottom to top. . . . The scanning operation may be started from either the left edge or right edge of the frame 12, so that the image-bearing surface 10 can be scanned left to right or right to left.

The Pryor reference appears to teach an imaging system that can be used to perform a scan of a document by driving a linear photosensor array arm over the document, either from left to right (top to bottom) or from right to left (bottom to top).

The Pryor reference does not teach moving a first scan line during scanning relative to the object in a top to bottom scan direction and a second scan line during scanning relative to the object in a bottom to top scan direction.

In contrast, Applicant's independent claim 1 recites a method of scanning an object that includes:

> moving a first scan line during scanning relative to the object in a top to bottom scan direction;
> moving a second scan line during scanning relative to the object in a bottom to top scan direction;

Additionally, the Pryor reference does not teach scanning a first image bearing media in a top to bottom scan direction, and scanning a second image bearing media in a bottom to top scan direction. In contrast, Applicant's independent claims 3 and 5 each recite:

> scanning a first image bearing media in a top to bottom scan direction;
> scanning a second image bearing media in a bottom to top scan direction;

Lastly, the Pryor reference does not teach a transport assembly connected to the scanner controller for moving a scan line relative to the object in a top to bottom scan direction followed by moving the scan line relative to the object in a bottom to top scan direction.

In contrast, Applicant' independent claim 8 recites:

> a transport assembly connected to the scanner controller for moving a scan line relative to the object in a top to bottom scan direction followed by moving the scan line relative to the object in a bottom to top scan direction;

As such, Applicant respectfully submits that each and every element and limitation of independent claims 1, 3, 5, and 8 is not present in either the Rackman reference or the Pryor reference, alone or in combination. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the §103 rejection of independent claims 1, 3, 5, and 8, as well as those claims that depend therefrom.

The Examiner further states it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of Rackman by the teaching of Pryor to include: moving a second scan-line

relative to the object in a bottom to top scan direction, for the purpose of obtaining compensated illumination intensity and to reduce the movement of the scan carriage and scanning time. Applicant respectfully disagrees.

As previously discussed, neither the Rackman reference nor the Pryor reference, alone or in combination, teach or suggest each and every element of Applicant's independent claims 1, 3, 5, and 8. Further, there is no suggestion or motivation to combine the imaging apparatus taught by the Rackman reference with moving a second during scanning scan line relative to the object in a bottom to top scan direction, as taught by the Pryor reference even if the Examiner believes the Pryor reference suggests moving a second scan line during scanning relative to the object in a bottom to top scan direction,

As mentioned above, the Rackman reference appears to teach determining whether an incoming document that was already scanned and stored in memory conventionally from top to bottom arrived top first or bottom first by a character recognition program so as to control whether reading of the already stored data takes place either in the same order in which the data was stored or in the reverse order. Character recognition software can be used to read the stored data twice, in a forward manner (top to bottom) and in a reverse manner (bottom to top), in order to determine if the document was oriented normally or "upside down" when scanned by the imaging device. (see col. 4, lines 44-55).

Also as mentioned above, the Pryor reference appears to teach an imaging system that can be used to perform a scan of a document by driving a linear photosensor array arm over the document, either from left to right (top to bottom) or from right to left (bottom to top). (see col. 9, lines 31-40).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990); MPEP § 2143.01.

While the image reader of the imaging system taught by the Pryor reference appears to teach an image reader that can move right to left or left to right, there is no suggestion or motivation in the references that modifying the imaging system of the

Rackman reference to include the image reader of the Pryor reference would be desirable. Modifying the imaging system of the Rackman reference to include the image reader of the Pryor reference requires impermissible hindsight.

The Examiner states the modification would be obvious for the purposes of obtaining compensated illumination intensity and for reducing the movement of the scan carriage and scanning time. However, the modification would not reduce scan carriage and scanning time. For example, the modification of the imaging system of the Rackman reference would not reduce scan carriage and scanning time because documents need only be scanned once by an image reader as taught by the Rackman reference. Data representing the scanned document is stored in memory upon being scanned. As mentioned above, at column 4, lines 45-50, the Rackman reference teaches that software can "scan" the already stored data in two directions. Moving a second during scanning scan line relative to the object in a bottom to top scan direction would not be desirable and would not reduce scan carriage or scanning time because the data to be "scanned" by software is already stored. Therefore, modifiying the imaging system of the Rackman reference to include moving a second during scanning scan line relative to the object in a bottom to top scan direction would actually increase scan carriage and scanning time of the imaging system since a data representation of the scanned document is stored in memory after the image reader scans the document an initial time.

Furthermore, there is no desirability suggested by the references for modifying the Rackman reference for the purpose of obtaining compensated illumination intensity. From Applicant's reading of the Pryor reference, the ability of the image reader to move from right to left and from left to right does not appear to result in compensated illumination intensity. Therefore, modifying the imaging apparatus of the Rackman reference to include moving a second during scanning scan line relative to the object in a bottom to top scan direction would not be obvious for the purpose of obtaining compensated illumination intensity.

Based on the foregoing, Applicant respectfully submits that the cited references do not support a proper prima facie case of obviousness. Applicant respectfully requests reconsideration and withdrawal of the §103(a) rejection to independent claims 1, 3, 5, and 8, as well as those claims which depend therefrom.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Gregg W. Wisdom at (360) 212-8052.

At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS AF Commissioner for Patents, P.O. BOX 1450 Alexandria, VA 22313-1450, on this 23rd day of February, 2006.

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